Execution by Electricity.

See page 282.

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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

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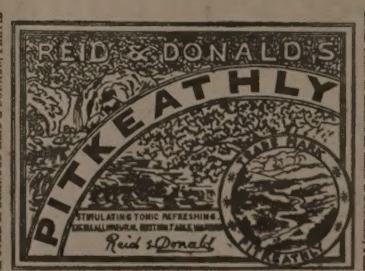

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EDITED BY

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LONDON: *FRIDAY, AUGUST* 3, 1888.

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Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

THE British public are much given to the use of hair-lotions and hair-washes. They may learn something interesting on this topic from the *American Analyst*, which says that recent analyses have shown that of the preparations for bleaching the hair to "the delicate golden shade so much admired by the court circles of Europe and the best society of the United States," to quote from a label on one of the bottles, all depend for their action upon the decolourizing and corrosive influence of nascent oxygen or nascent chlorine. The bases used in the various nostrums for this purpose are peroxide of hydrogen, aqua regia, and bronzer's acid.

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PEROXIDE OF HYDROGEN is the mildest and most innocuous of the trio named. It is a colourless liquid which destroys the natural colour of the hair, and which, if used long enough, turns it an unnatural greyish-white. It is rather expensive, and is therefore used much less than the two other acids. It produces sores upon the scalp, and gives rise to skin-complaints that resemble tetter, salt-rheum, and scald-head. The two acids are equally vile. They attack and eat the hair and skin alike. The former they partly bleach and partly burn to a handsome gold colour; the latter they stain to about the same hue as does a light application of iodine. Besides the dermatologic troubles named, they cause maladies hardly distinguishable from eczema and erythema. One curious disease that they cause is an inflammation of the cells of the hair follicles (or sacs from which the hairs spring). The cellular walls break down, and lymph, and often blood, is extravasated in appreciable quantities. All three bases produce falling-out of the hair and premature baldness.

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DR. GODDING, Superintendent of the Government Insane Asylum in Washington, has written a letter to one of the committees of Congress, in which, while showing that it would be unwise to confine inebriates with insane persons, he makes the following interesting remarks: — Inebriety as a disease is distinct from insanity. Inebriates resent being placed with the insane; nor are the insane, as a rule, proud of them as associates. Insane from the poison of drink, as they undoubtedly are while the liquor is in them, they now and then get committed to hospitals for the insane, and in their detention during convalescence they afford interesting though unprofitable psychological studies. Dissolute in habit and idle in life, they are uncomfortable from the start.

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THEY are usually fault-finding and impatient at their detention, denouncing everybody and everything about them. When quiet and seemingly at ease in their lot, they are studying how to smuggle in whisky or effect an escape. In them, moral honesty and generous impulses are sadly wanting, and a condition of settled discontent characterizes the enforced abstinence of their hospital life. What they need is occupation and prolonged treatment in an industrial home, where they can be kept at work at enforced labour under the supervision of a judicious physician. As a rule, confinement in idleness does them little or no good.

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DR. A. SCOTT MYRTLE states that in rural districts ringworm is not uncommon, and is to be met with among the ruddy, sturdy country children in the same forms as we find it in the densely-peopled slums of our great cities. The way in which it is propagated, he adds, is simple enough. Cattle and horses are very liable to tinea circinata, they give it to the servants, these in turn to the children of the labourer, farmer, and squire. The worst cases he had ever seen were in blondes, surrounded with everything that could favour health and ward off disease.

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The surroundings of a patient suffering from rheumatism are a matter of no little importance. An American medical journal rightly says that free ventilation should be secured, but without draughts, and the temperature kept between 68 degs. and 70 degs. Fahr. The patient should be clothed in flannel and lie between woollen blankets. His covering should be light. An excess of bedclothing will add to the pain in the inflamed joints, and unnecessarily increase the sweating. It should be a studied effort to spare him any painful movements possible, and every ministration should be gentleness itself.

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Milk, with seltzer water or lime water, pre-eminently meets the requirements as the principal article of diet, during the active period of the disease. If this proves insufficient, or is not well borne, then other light and concentrated food can be administered. Some authorities insist that animal food and alcohol are contra-indicated during the height of the fever. The latter should certainly be prohibited as a rule, but the patient's diet need not be so much restricted as in other highly febrile disorders. Those who are habituated to the use of stimulants should not be entirely deprived of them.

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I observe that a Russian *savant* has found that when a volume of boiling water equal to that of a gelatine culture of typoid bacilli (or germs) is used on the culture the bacilli are only partly destroyed; and that when the volume of water is double that of the culture all the bacilli are killed. Experiments on the excretions of typhoid patients showed that when four times the volume of water was added to the dejecta, the bacilli were invariably destroyed.

✿ ✿ ✿

In Great Britain, in 1886, 511 deaths occurred from poison, including cases of chronic poisoning by lead. Of these, 327 were accidental, 178 suicidal, and only 6 homicidal. Lead heads the list of agents giving rise to accidental poisoning (95 cases); then follow opium and its derivatives (82 cases); carbolic acid (20 cases); belladonna is responsible for 9 cases; alcohol for 7; aconite, chlorodyne, and hydrochloric acid, each for 6; prussic acid, ammonia, strychnine, each for 5. Carbolic acid was selected by 42 suicides; opium, laudanum, or morphine, by 41; oxalic acid by 28; prussic acid by 25; vermin-killer by 18; hydrochloric acid by 15; strychnine by 14; sulphuric acid and arsenic have lost their popularity, the former having been used only by six and the latter by five persons.

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The greater number of the several hundreds who lost their lives in the recent great blizzard of the North-west in America are supposed to have perished from suffocation and not by freezing. Many of the bodies, when found, were in the position of grasping or clutching at their necks or throats. Indoor witnesses describe the atmosphere as having an appearance of density and darkness, similar to that stated by divers as existing when submerged with their armour in deep water. Many that escaped describe their peril as being from loss of breath or suffocation.

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Great are the wonders of the telephone. A physician reports to *Gaillard's Medical Journal* that he was saved a two mile ride through a driving storm the other night by having the patient, a child, brought to the instrument and held there until it coughed. He diagnosed false croup, prescribed for the patient, and turned in for an undisturbed sleep during the remainder of the night. He found the patient in the morning doing nicely—under the care of another doctor.

Original Essays

"Life is not to live, but to be well."—*Martial.*

MIND IN DISEASE.

By Dr. Andrew Wilson.

That the mind exercises over the body a very direct influence is, of course, a trite remark, and one illustrated to the full in our daily life and experience. It is matter of commonplace observation to find that in the question of health and disease, as in that of ordinary affairs, "there's nothing either good or bad, but thinking makes it so." The hopeful patient contributes, by his frame of mind, very largely to his cure; just as the patient who is depressed and anxious over his ailment is likely to delay his recovery. These observations may be taken simply to mean that the brain and nervous system together govern and control the physical powers. Their action on the tissues in disease may be of subtle, and often, in truth, of inexplicable, nature. Of the reality of their power, however, no doubt can be entertained. The nervous centres in man appear as the autocrats of the bodily kingdom, and on their attitude and disposition, so to speak, to the tissues and parts of the frame depends much of its woe and much of its weal likewise.

There are, however, other and not less interesting phases of the relation of mind to body which come under the notice of the physician. Such a thing as *mind-produced disease* is a reality of existence. Apart, too, from insanity viewed as a disease of the brain, there are affections which, beginning in some nervous irregularity, are not only made to affect the body continually, but may be capable of being transmitted to other subjects. If there is such a thing as ordinary physical infection, there is also such a fact of nature as "moral contagion." Not only do such disorders imitate other ailments, but they are imitated in turn by the nervous systems of those predisposed to such irregularities of mind and nerve. The parallel between these nervous diseases, or, as we may call them, "moral" disorders—ailments of the moral sense and of self-control—and the more purely physical affections of the body is a very close one. Thus, like fevers and other diseases, they choose their subjects. Certain persons are more subject to them than others. Again, just as a plague has its periods of invasion, full development, decline, and death, so the moral disorders of the mind and nerve centres exhibit their times of increase and times of decrease as well. It is not improbable that waves of emotional and mental excitement are regulated in their appearance and passage by conditions as definite as are those of physical ailments; only we know little at present concerning such conditions in the case of the moral diseases which appear in our midst.

There is, however, no lack of examples of these disorders of mind imitating or actually producing a disease. The tendency towards *imitation* is in itself very strongly marked in many nervous subjects, and acts as a veritable source of mental and bodily disorder as well. We gain a clue to the nature of this "imitative" action when we witness a great crowd swayed by the oratory of an eloquent and persuasive speaker. The mass of persons is swayed, unconsciously, as one man by his words. Every eye is strained to follow his gestures, and as the emotions excited by his discourse rise and fall, they pass through the audience as if they affected a single man. Here there is emotional excitement of like nature, pro-

duced by one and the same cause. There is an allied case in the propagation of sympathies and feelings seen in the case of fainting persons in an audience. Over and over again it has been my lot to notice that one person, by fainting in full view of the audience, will be followed by several others who, until the first casualty happens, did not dream of exhibiting any traces of such an ailment. I have also been struck by the fact that a stern word of remonstrance, mingled with a *soupçon* of sarcasm, from the platform has had the effect of limiting the number of patients in such a case. An impression, that of sympathy inducing fainting, is here abolished and conquered by another and more powerful one, that of fearing to be made the subject of public remark.

Dr. Carpenter, in his "Mental Physiology," gives a very typical and illustrative case of the production and cure of "imitative" nervous disease. A nun in a large convent in France, affected by some hysterical feelings, took to mewing like a cat. Influenced by her example, several of her companions began to imitate the feline noises. The epidemic of mewing spread rapidly, until the whole convent was given up to cat-like squalling. The whole of the nuns chorussed in cat-fashion every day at a certain time, and continued mewing for several hours together. Day by day this concert proceeded, until some wise person in authority announced that a company of soldiers had been placed at the convent door, and that in event of the "cat concert" being continued they had instructions to whip the nuns with rods. This threat had the desired effect. The feline imitations ceased. A stronger idea, that of flagellation, having supplanted the imitative idea which had possessed these women. There was an allied case reported in the 15th century from a German nunnery. Here a nun fell to biting her neighbours. Then the infection spread, and the whole convent took to this unusual form of exercise or amusement. From one convent to another the imitative delusion passed, and throughout Germany the biting epidemic spread. Then it attacked Holland, and ultimately made its way to Rome.

These are illustrations of what may be termed the "motorial" type of moral disease, arising from moral contagion, and spreading through the affection of the moral sense thereby induced. We see states involving often violent movements induced as the result of pure imitation of, or association with, the disordered type of mind. The history of medicine is full of records of so-called "Dancing Manias." Dr. Hecker, in his work on "Epidemics of the Middle Ages," gives numerous illustrations of the rise and spread of such moral disorders. Men and women in 1374 at Aix-la-Chapelle, for example, were seen to form circles, hand in hand, and to dance for hours together, in a kind of wild delirium, until they fell senseless on the ground. They exhibited a religious paroxysm in which they declared they saw the heavens opened. This "mania" spread from Aix to Cologne and Metz. In the streets of the latter town, 1100 "dancers" were seen on one occasion. Sober-minded men and women left their houses and threw themselves into the crowd of dancers, so great was the influence of the imitative idea.

"St. Vitus's Dance" is doubtless due primarily to an affection of the nervous centres; but it is a curious fact that there is no disease more liable to be imitated, especially by the young. A case is given in which a mere child, who had seen a woman suffering from this affection, began to imitate her movements, not merely in childish mockery, "but as if governed by some uncontrollable impulse received through the sense of sight." This "disease" spread to another child; and to a third child also. The further spread of the imitation was only arrested by the isolation of the patients, and by other appropriate moral treatment. When we read of such facts in the history of imitative disease, we may well cease to wonder at the influence which the example of their elders exerts upon the education and upbringing of children. The high importance of subjecting the young only to those sights and events likely to exert calm and healthy influences is demonstrated in a very clear fashion by the consideration of the present subject.

In modern days, we are by no means free from the spread of emotional disease and its attendant evils. The tactics of many of the "religious" movements which have of late years sprung up in our midst, foster this class of mental and moral ailment in a remarkable fashion. The person who screams out in a "revival" meeting that he has "found salvation," and the crowd of votaries that imitate him, represent the influence of unconscious sympathetic action induced by the energetic appeals of the speakers. It is no disparagement to anything which savours of the true religion of sober-minded persons to denounce in unmeasured terms the hysterical religion of these latter days. The scenes enacted in "Glory Holes" and other places where such orgies are enacted, really imitate in the nineteenth century the dancing mania and other epidemics of the sixteenth. Camp-meetings, and the excitement which prevails thereat, parallel the "leaping ague" of Scotland of past days. "Religion" in such cases is merely a passing hysterical emotion which is either only recovered from leaving its subject exhausted and weak, or which lands the patient within the walls of a lunatic asylum. The medical historian of our century will write an interesting chapter on "religion as a disease"; and he will find, perchance, as many illustrative examples in the records of our time as were to be discovered among the Flagellants of the 13th and 14th centuries, the *convulsionnaires* of St. Médard, or the Tarentism of Italy.

"Faith-cures" exemplify another phase of the action of mind in imitating, producing, and in curing disease. These "cures" have already been fully discussed in these pages. It may suffice to quote a single illustration of the power of the brain to influence the body and its ailments.

Dr. Richardson quotes a case in which a young woman who had been in close attendance on a consumptive friend, began to imitate all the ways of the patient. The imitation of cough, breathing, and voice was perfect; nevertheless, not a sign of the disease could be detected by all the physicians who examined her chest. After two years' exhibition of these symptoms, "she suddenly recovered," says Dr. Richardson, "as I and many of my learned brethren had foretold." This writer's comments on such a case should not be omitted. "There have been many assumed recoveries of this kind from consumption," he adds, "and sometimes the recovery has been perfected while the patient was undergoing a particular form of treatment. Then the grand discovery of a cure for consumption has been blazoned forth, some worthy son of Æsculapius has been unduly praised, or some quack has reaped false credit and dishonorable gain." Those who read the accounts of marvellous "consumption cures," for the announcement of which, in its advertising pages, the religious press is specially distinguished, should bear these observations duly in mind

"LIKE BEGETS LIKE."

By Dr. E. J. Dungate.

EIGHTEENTH AND CONCLUDING PAPER.

In the chapter on fractures in Erichsen's "Science and Art of Surgery," Erichsen mentions that some few cases have been known of a hereditary tendency to fracture of the bones. A case is recorded "in which the grandfather had had several bones broken; he had three sons and two daughters: the youngest son and two daughters escaped without fractures; the eldest son, who had one bone broken, had two children, the elder of whom had thirteen, and the younger two fractures; the second son, who had two fractures, had five children, who suffered respectively four, four, eight, four, and three broken bones." In the *Medical Gazette* for June, 1833, Arnott mentions that a child, fourteen years old, had thirty-one fractures. Her sister, who was six years old, had nine.

There are some diseases concerning which it is very difficult to decide as to whether they are hereditary or merely endemic. Cretinism, with its frequent concomitant *goître*, has been thought by some to be due to the atmospheric condition of the ill-ventilated valleys of Switzerland, where it is rife; others regard it as the result of drinking calcareous water. Goître, however, is not confined to deep, narrow valleys, as some suppose. Dr. Livingstone mentions that he found it both prevalent and frequent at a height of 3,550 feet. Shakespeare connected the disease with mountains, as may be seen in the *Tempest*, act iii.:

> "Who would believe that there were mountaineers,
> Dew-lapped like bulls, whose throats had hanging at them
> Wallets of flesh?"

Although commonly spoken of as hereditary, cretinism is no more hereditary than ague. The children of cretins have no trace of the disease, if the parents have removed from the district where that malady prevails.

Sir Henry Holland, when in Iceland, collected some facts concerning a disease called *trismus nascentium*. He found that it was very common in the Vestmann Islands to the South of Iceland. The population of those islands at that time was about 160, and he ascertained that during twenty-five years 180 children had perished from the complaint, all being under the age of twenty-one days. After very careful examination, he could trace no difference between the conditions of life of these people and those upon the mainland; consequently, we may conclude that the causes were constitutional and hereditary. On small islands, diseases have a much greater chance of being perpetuated on account of the intermarriages which take place.

Several examples have been recorded of congenital and excessive thirst. Mr. Sedgwick investigated a case at the village of Barley, near Royston. "Two male children in the family of a farm-labourer, which consisted of seven sons and two daughters, have suffered from congenital and excessive thirst, which has gradually become less and less after the completion of growth. Their maternal grandmother and a first cousin (mother's sister's son) have been similarly affected. The family, since first coming under my observation, some sixteen or seventeen years ago, has dispersed; and, at the present date, Barley possesses only one sufferer from congenitally excessive thirst.

Diseases of the Nose, with Chapters on Ozœna, Impure Breath, Polypus, and Malformation of the Nose, and Analysis of Cases treated by a new method. By Litton Forbes, M.D., Senior Surgeon to the Eye and Ear Hospital, 67, Wells-street, W. —Henry Renshaw, 356, Strand, W.C. Price 1s.—[Advt.]

Corpulence is sometimes a fatal disease. M. De Saint-German made investigations in order to prove whether or not it might be hereditary. He shows that it probably is so. Professor Bouchard shows that out of eighty-six cases thirty-one were due to hereditary tendency. Chambers noted that out of thirty-eight cases heredity was traceable directly in twenty-two, and seven times in the collateral line.

Not only is susceptibility to contagious diseases often hereditary, but—and it is gratifying to know this—an immunity from certain diseases is inherited. According to Dr. W. C. Wells, negroes and mulattoes enjoy an immunity from some of the tropical diseases. Professor Kaltenbach, of Giessen, says (Virchow's "Arch.," Bd. 101, Hft. 1) that he has twice known examples of inherited immunity. A twin girl twice escaped the contagion of scarlet fever when members of the household, including her twin sister, were attacked by the disease. With regard to other diseases the twins suffered alike, for they had catarrh and measles simultaneously. The mother of the children had scarlet fever in her childhood very severely, and Professor Kaltenbach notices it as an extraordinary fact that the child who enjoyed the immunity resembled the mother physically and mentally, while the other bore a striking resemblance to the father. In the other case a woman attacked with small-pox gave birth to three children, two of which were covered with a vesicular eruption; the third, however, was quite healthy. The inference was that the healthy child owed its immunity to the father; but whether the father had been protected by vaccination or not was not known. Altogether, it seems quite impossible, at present, to formulate any law concerning the transmission of immunity from disease.

Dr. Hutchinson says: "Not unfrequently the subject of tobacco amaurosis (tobacco blindness) is one who was well aware of his susceptibility, who had experienced unusual difficulty in learning to smoke, and who had never been able to change with impunity from one kind of tobacco to another. Some years ago a young man came under my care who was a smoker, and who had smoker's amaurosis. Subsequently his mother—who did not smoke—came to me for an almost similar state of things; and I then learned that a nephew of hers, a smoker, had suffered just like his cousin, and had been under the care of my colleague, Mr. Hulke. I applied to Mr. Hulke for his diagnosis, and he kindly sent me a copy of his notes, showing that he had considered it a tobacco case. Here, then, we have three near relatives presenting the same form of disease. In the woman, who did not smoke, the disease did not show itself until twenty years later in life than in the two young men who did; and in them, on abstinence, the disease was arrested; whilst in her, in whom no change of habit could be made, it increased. Can we doubt that we have here a case of family proclivity?"

The mere gathering together of facts to prove that sundry diseases are hereditary is of little use when we further consider the means by which we may combat with hereditary tendencies. A predisposition may be very slight or otherwise; but, however that may be, we shall be rewarded for carefully guarding against anything which tends to encourage it. Whenever hereditary proclivity of any injurious kind—such as rheumatism, consumption, or scrofula—exists in a family, the members of that family must be assiduous and constant in their endeavour to avoid all causes which may foster and develop the characteristic tendency.

If insanity is hereditary in a family, the members of

that family must strictly guard against all mental irritation. If a man has a tendency to lung disease he must avoid localities where the atmosphere is moist and foggy and the temperature unequal. Nothing is more certain than that dampness favours consumption. Consumption, rickets, and scrofula are all rife in damp valleys. In Rouen and the neighbourhood, where the soil is very marshy, the deaths from consumption are very numerous. On the other hand, the most delicate invalids may sometimes take out-door exercise with great advantage in the pure dry air of the Swiss mountains.

When there is a tendency to scrofula, great care must be taken that the clothing be warm and the diet nutritious. A residence of three weeks at Vichy during the year is said to prevent a gouty subject from being attacked for the rest of the year. The waters of Carlsbad and Vichy are of great advantage in every calculous disease. Exercise is very beneficial against gout; so it is against many other diseases. An old writer says that it is a good cure for remorse.

Dryden says:—

"The first Physicians by Debauch were made;
Excess began, and sloth sustains, the trade.
By Chace our long-liv'd Fathers earn'd their Food;
Toil strung the Nerves and purifi'd the Blood;
But we their Sons, a pamper'd race of Men,
Are dwindled down to threescore years and ten.
Better to hunt in Fields for Health unbought,
Than fee the Doctor for a nauseous Draught."

Further, although this advice will rarely be deliberately followed, it is of the highest importance not to marry into a family which has an hereditary taint in common with one's own family. Mercatus advises all men to choose women *si fieri potest, quæ maxime distant naturâ.*

Cockroach Poison.—The following is said to be efficacious in destroying these intruders: Sugar of lead, one ounce; powdered borax, two ounces; wheat flour, three ounces. Well mix, and place in the way of the insects.

Ringworm.—Seven grains of chrysophanic acid in one ounce of chloroform is a good application in ringworm, applied cautiously two or three times a day with a camel-hair brush; the inhalation of the vapour being avoided.

Manufacture of Milk Sugar.—Milk sugar is now largely used in pharmacy, especially since the introduction by M. Ch. Chanteaud, of Paris, of the granular preparations used in the dosimetric method of treatment. The manufacture of the dosimetric granules absorbs considerable amounts of milk sugar, with which the alkaloids and their salts are coated. In homœopathic preparations, also, the globubles consist largely of sugar of milk. In order to supply the demand thus created, we find that in Switzerland, more especially in the neighbourhood of Morbach, large quantities of milk sugar are now manufactured. The crude lactine is obtained as a coarse, dirty powder by the direct evaporation of whey. It is stated that fifty thousand quarts of whey thus yield about two thousand five hundred pounds weight of this crude sugar. The refining of the crude lactine is done by dissolving it in water at 65 degs. C. of temperature in copper pans, and adding something less than 2 lbs. of alum or sulphate of alumina. The liquid is then filtered through animal charcoal, boiled down to a syrup, and then allowed to crystallize slowly on wooden rods. The yield is from 55 to 60 per cent. of the crude lactine.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

A PHYSICIAN ON DIABETES.

A not uncommon disease, which many have who hardly suspect its presence, is diabetes. In this affection there is a greatly increased quantity of urine, which may or may not contain sugar. It was from this ailment that Dr. Fothergill—an esteemed contributor to our pages—recently succumbed, the malady being complicated, as it sometimes is, by gangrene. Dr. Hofmeister practises at Carlsbad, and he insists that "strict diet and Carlsbad waters, drunk at the place, form the best method of dealing with this disease." Notwithstanding this sweeping assertion, the following must be of interest to diabetics, and should be preserved by those with any tendency to the disease. (The translation is culled from *The Medical Record*):—

1. The dietetic and hygienic regimen ought not to be totally changed in a sudden way. Sweet things must be at once forbidden; the amylaceous food should at first be confined to vegetables of all kinds, except the leguminous ones, and bread, 100 grammes of which may be allowed, this quantity being gradually reduced to 60 grammes, and so on. This paragraph, however, is incomplete without reference to the new sweetening agent, saccharine. This may be taken freely and safely by diabetics; it renders the food agreeable, one tabloid being sufficient to pleasantly sweeten a cup of tea or coffee. It may also be used in making bread. Foods made with it are indistinguishable from those made with sugar, which those afflicted with diabetes should not run the risk of taking.

2. Pure fat and fatty meats are highly to be recommended for their great efficacy against congenital predisposition to diabetes; 150 to 100 grammes may be allowed daily.

3. An exclusive meat diet (Banting treatment) is rather dangerous in diabetes, because it strongly promotes the disintegration of albumen—that is to say, emaciation.

4. All substitutes for bread are objectionable, partly because they contain a considerable amount of starch, and partly because they are all more or less indigestible. Fürbringer's gum bread (*Kleberbrot*), manufactured by Basserman, at Mannheim, seems to be the least injurious of these.

5. Diabetics ought to masticate perfectly each bit of food, eating slowly, in order to mix the food completely with the mucus of the mouth.

6. In all cases in which a somewhat larger indulgence with regard to the diet is admissible, all sorts of vegetables, including the sweet ones (turnips, carrots, cabbages, &c.) only excluding the leguminous (peas, beans, and lentils), are permitted, likewise raw kernel fruits and berries.

7. Milk and wine should be allowed only in small quantities, even in mild cases; half a pint of each daily should be looked upon as the maximum dose. All sorts of beer must be forbidden under all circumstances.

8. Exercise is much indicated; especially as long as farinaceous food is partly allowed. The best time for it is immediately after dinner, and it should be continued for at least two hours. Riding on horseback and hill climbing (if the ascent is not too steep) are certainly preferable to gymnastic movements indoors; but when outdoor exercise cannot be taken we are now in posses-

sion of a good substitute—I mean the "ergostat," recently invented by Professor Gärtner, of Vienna. Patients who, in any stage of the disease, are easily fatigued by the least muscular exertion, will derive great benefit from daily massage of the whole body for twenty minutes (Finkler).

9. Warm baths, as the best means of keeping the function of the skin in order, are very beneficial to sufferers from diabetes, provided that they are used at a temperature of 93 degs. to 94 degs. for fifteen minutes, not oftener than twice a week.

10. The mineral waters of Carlsbad are undoubtedly of the greatest use in the dietetic and medical treatment of diabetes; their effect is mostly due to the alkaline salts they contain.

CREED, CRAFT, AND CURE.

By Meredith Clymer.

SECOND PAPER.

Christian Science heals by working on the consciousness, and "a mental cure is the discovery made by a sick person that he is well." The patient is told to "cast aside all thought of sickness and pain, and know that God is the only panacea, Divine love the only medicine." This Divine love is to be got by seeking "the help of a Christian healer," who says to the patient mentally: "You have no disease; what you call your disease is a fixed mode of thought arising from the absence of positive belief in absolute good." A sufferer from gout is told that it has no real existence, but that it is "a shadow of doubt reflected in the feet, . . . a mere negation. Look down yourself, and see that it is gone, . . . the place where you located it now shows for itself as sound as the rest of your body." Another writer gives us a compact and lucid exposition of the *modus medelæ:* "It consists in a vigorous holding of the patient to his right of soul growth, unobstructed and unretarded by physical defects."

A form of prayer is sometimes given to the sick; not "prayer with the old interpretation," which "begs the Father to change the unchangeable," but "prayer with the new interpretation," which "lifts the beggar to the comprehension that he himself has omitted to take the gifts already prepared for him." The Rev. Dr. J. M. Buckley, in an entertaining and thorough article on Christian Science, gives a "Prayer for a Dyspeptic," from a text-book on Mind Cure. It concludes thus:

"Lord, help us to believe that all evil is utterly unreal; that it is silly to be sick, absurd to be ailing, wicked to be wailing, atheism and denial of God to say 'I am sick.' Help us stoutly to affirm, with our hand in Thy hand, with our eyes fixed on Thee, that we have no dyspepsia, that we never had dyspepsia, that we will never have dyspepsia, that there is no such thing, that there never was any such thing, that there never will be any such thing."

Should a patient appear to grow worse, it only shows that the crisis is approaching; this is called "chemicalization," and is "the upheaval, when mental truth is destroying erroneous and mortal belief. It brings sin and sickness to the surface, as in a fermenting fluid, allowing impurities to pass away."

There being "no space or time to mind," distance offers no hindrance to the Christian healer, and he is quite as potent if he be in New York or Boston, and the patient in San Francisco or Brooklyn. "Every thought that you think will be transferred to the person thought of, if you only think long enough and strong enough." "The living image and inner personality seem to stand before us, and what we say to it we say to him." Though faith is not held to be essential to success, it is acknowledged to be a good helper.

This is a fair presentment of the principles and practice of Christian Science in the words of its founder and its chief teachers. It is a strange compound of theology, cosmology, ontology, and healing, and full of impossibilities, contradictions, and inconsistencies. There is little heed given to the apostle's caution: "Unless ye utter by the tongue words easy to be understood, how shall it be known what is spoken?" and a good deal of speaking in the air, so that it is not easy to get at the meaning of the voice. The theology of this "science" cannot be tortured into any known system of Christianity, primitive, mediæval, or present. One of its leading professors, on being asked why they called themselves "Christian Scientists, while they refused all the chief dogmas accepted by all Christian sects," replied that "though rejecting doctrinal Christianity, they regarded Jesus of Nazareth as the most perfect exemplification of the triumph of mind over matter."

Its ontology is a crazy-quilt patched with every crotchet of philosophers, from Plato to brain-fagging Hegel. Dr. Armstrong styled metaphysics "talking grave nonsense on subjects beyond the reach of human understanding;" and Michelet, "*l'art de s'égarer avec méthode.*" Here we have the nonsense in abundance, and the bewilderment without the method. In spite, however, of its being just now somewhat out of favour and fashion, there always has been in metaphysics, as Goethe observes, "much wisdom of thought." The ontology of Christian Science is borrowed from the Greek philosophers and Bishop Berkeley, and looks upon the phenomenal world as a mere mirage, an illusion of the thinking self. It regards the cosmos as God, and man as a manifestation of the Divine Essence which pervades the universe, and in whom he is contained. Real Space is the Eternal. The universe is a thought, a beat, a pulse of the Absolute Mind. There is no corporeal or material existence, only an incorporeal active essence or spirit. The cosmos is a mind-constituted universe, in which all external things exist only as clusters of dependent and powerless phenomena, perceived and affected by active mind. In plain words, the existence of an external world is denied, the representation which we have of it corresponding to no objective reality. The one and only thing is mind.

The problem of mind and body has occupied the best thought for many ages, and the extent and nature of their connection has been the subject of active and even acrid dispute between the most prominent philosophers. That much progress in the study of the nervous system has been made, particularly during the latter half of this century, is true; but it is also true that to a great degree it is still what D'Alembert said of the space between geometry and metaphysics, "*l'abîme des incertitudes et le théâtre des découvertes.*" If we have a better knowledge of the intimate structure of the brain, we are still struggling with a full understanding of its offices.

Psychology to-day is either monistic or dualistic. The monists insist, as a fundamental fact, that there can be no manifestation of consciousness, no psychical activity, without correlative molecular change of nerve-element, and that this is all-sufficient. The dualists, on the other hand, contend that the nerve vibrations or impulses are set agoing by a special entity, and are its phenomenal expression, the physical series and the psychical series

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keeping abreast. Both schools concede, therefore, the necessity of a physical basis for the manifestation of the facts of consciousness. Mind for the one is a force of matter; for the other an entity dwelling in the organism, and using it as an instrument for the purpose of expression. Without an environment to act upon the organism, and without an organism to perceive, feel, and react, there can be no mind. Our knowledge, our beliefs, are derived from the impressions of an external world, which stream into our senses, "are combined within the mind by laws of association, and are grouped, analyzed, re-collected, till they form our facts, cognitions, principles, propositions, and generalizations." All states of mind are states of body. If the mind rules the body, the body rules the mind. The mental and bodily functions are bound indissolubly together, and there is essential interdependence. Perfectness of service is adjusted to integrity of substance, any defect of the latter marring the proper expression of the force. "The influence," says Huxley, "of diet upon dreams; of stimulants upon the fullness and velocity of thought; the delirious phantasms generated by disease, by hasheesh, or by alcohol, will occur to every one as examples of the marvellous sensitiveness of the apparatus of ideation to purely physical influences."*

After spiriting away the body, and saying, with Master Doctor Caius, "dere be no bodies," or with the Berkeleyites, that the body exists only as a phase or quality of mind, the Christian Scientists, with rare contradiction and inconsequence, "materialize" it out of "mortal mind" for the purpose of contumely and contempt. The body has long had its "bites and blows" from heathen philosophers and Christian theologians. Now, if we know anything, we know our own bodies. Almost the first acts of consciousness of the infant are the attempts to get acquainted with its body. "We know," says Lewes, "that we exist as objects perceptible to our senses, and to the senses of others; and as subjects percipient of objects and conscious of feelings. We live, feel, and move. The solidity, form, colour, weight, and motions of the body constitute the objective, visible self. The sensations, ideas, and volitions constitute the subjective, intelligible self." "In man there are other things great besides mind," writes Dr. Maudsley, though Sir William Hamilton had hung in his lecture-room the legend, "In man there is nothing great but mind;" forgetting how barren is the study of mind without the study of the body. Is no account to be taken of the wondrous organization of the great primary apparatuses by which the life of the individual is maintained and the species preserved, and of the nervous and muscular systems by which man is put in relation with his fellow-men and an external world? To those who believe that man was created in the likeness of his Maker, who "breathed into him the breath of life, and made him a living soul," such vilification, whether from pagan, philosopher, or priest, can only arouse a feeling of disgust. Whether we look on man as a dismissed angel or an improved ape, he is still the same wonderful piece of work, "the paragon of animals."

As may easily have been guessed, we find in the following quotation from one of the "professors" of Christian Science the keynote of their treatment, and its true explanation: "To modify the patient's views with regard to himself, we apply the principle of Suggestion in positive affirmation." The foreign and the native-born "cures," if not one in theory, are one in practice.

The dogmas of Christian Science are a faith strained into a void. They ask a surrender of ordinary and well-grounded beliefs, by resolving the phenomena of nature into subjective affections, and making the external universe a mere shadow and echo. They contradict our senses,

"As if these organs had deceptious functions."

They disallow what we are most certain of, the existence of our own bodies. Christian Science denies disease, as we understand and know it, calling sickness a figment of imagination, our ofttime maladies mere beliefs, and affirms that "mortal mind" alone suffers. It disowns all knowledge of the building and doings of the wondrous tenement we dwell in, and rejects inquiry into the causes and nature of the disorders of the organism, as if any of its followers would trust a crippled watch to an ostler or a rag-picker. It demands that consciousness, reason, and intelligence be put aside. As Schopenhauer said of the vagaries of Hegel, it is "the emptiest verbiage and most senseless hodge-podge ever heard out of Bedlam."

To set aright "mortal mind," it employs charms and conjurations which, when stripped of the mystic terms they masquerade in with thin disguise, "stand bare and naked" as the method of Suggestion, which is, indeed, the substance of their cure. If these Christian Scientists really accept the rubbish to which they stand sponsors, they themselves must have infected minds. If creed and craft travel together, as one may shrewdly guess, there should be, if they possess any sense of humour, many a laugh at the emotional credulity of the hasty hosts who entertain, feed, and clothe them, and press the material dollars into their palms. Their trade-mark is a mockery and a snare. Lewes defines science "common sense methodized," and here common sense is trampled under foot. The unrighteous filching of a prefix, which their professed pantheism forbids, is a clever trick of traffic, a springe "to catch woodcocks," and which to a large part of the community should be as offensive as it is unwarrantable.

* "Life of Hume."

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The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

ART IN THE HOME FROM A MEDICAL STANDPOINT.

By I. N. Love, M.D.,
Ex-President of the Mississippi Valley Medical Association, &c.

(Concluded.)

We should remember that in the interior of the home, even more than elsewhere, art can be made to cultivate and kindle the imagination, and quicken the conscience; and that love, pity, faith, hope, charity, and, in fact, all the emotions, good, bad, or indifferent, are the offspring of the imagination. An environment which is beautiful is refining, and it need not be expressive of an extravagant outlay of money. Each room in the house should be treated according to the purpose for which it is intended, and should not be so large but that the different articles of furniture therein contained can have an opportunity for becoming acquainted with each other.

The prevailing thought should be welcome and good cheer. A chair, cold and stately, which says "sit down but do not tarry," may be appropriate in an editor's sanctum, but not in a home. A bookcase which towers to the ceiling, requiring a step-ladder to reach its upper shelves and top door, with a cornice so massive as to be dangerous to life and limb, may be all right for a public library, but not for a domestic one. More in accord with propriety is it if the books from the topmost shelf can be reached by the reader seated in his easy chair, and the space above be taken for the distribution of prints and pictures. A naked wall or an expensive fresco is unnecessary and uncalled for in these latter days when artistic prints, etchings, or paintings are within the reach of all. An appropriate picture upon the wall is never out of place, unless it be hung so high as to loose its identity. It is well to bear in mind that there is greater danger of hanging pictures too high than too low. Any vacant space upon the wall may be occupied by a picture, if the light strikes it in a manner to reveal its beauties. A picture may even stand upon the floor, resting against the wall, if it be safe from the danger of being kicked over. An empty fireplace may be covered to good advantage by standing an agreeable picture against it as a fire-board.

A good book is decorative, no matter where found in a room, save and except on the floor. A single thought upon pictures—select agreeable subjects, and that which is good of its kind. A creditable engraving or etching of small size, even though it be not an "artist-proof," is to be preferred to a pretentious daub, the chief merit of which lies in the fact that it is hand-painted. A wood shed smeared with vermilion or yellow ochre can lay claim to the same merit—that of being hand painted.

In regard to frames — massive paintings will bear massive gold frames. Etchings and prints as a rule require light natural-wood settings. There is more danger of frames being too heavy than too light. As a picture upon the wall may be likened to a window opening upon a scene beyond, care should be exercised in selecting that which is agreeable and appropriate. If the endeavour be to enforce a lesson, or preach a sermon, we should be careful not to obtrude the same at an inopportune place. A picture of the crucifixion within the leaves of the Bible as an aid to a lesson taught, or within the sacred walls of the sanctuary, surrounded by the dim religious light and the odour of sanctity, is impressive; but I question its value or appropriateness as a decorative feature of a home.

I recall a strikingly correct presentment on canvas of a naked corpse—a floater—drifting down the Thames or the river Seine (the ghastly figure taking up the greater part of the foreground), which hangs over the heavily carved mantel and the genial and generous open fireplace of a library in the home of a wealthy citizen—an art connoisseur of one of the large cities of this country. Accustomed as I am to the sad and even the horrible, I must confess to being shocked at such an exhibition of bad taste. What a scene to present to the prattling children of the home or unsuspecting guests rash enough to enter therein.

The exhibition is on a par with that of the physician who hangs upon the walls of his consultation room a copy of Rembrandt's dissecting scene, or a coloured reproduction of some dreadful case of cutaneous disease, all horrid and suggestive to the sensitive minds at least of his sick and suffering patients.

How much more appropriate in both cases would have been a picture of a vine-covered cottage, clumps of green-leaved trees, a running brook, glimpses of sunlight and shade, anything, in fact, suggesting the beautiful or the agreeable, rather than the horrible.

I would sooner hang in my home a cheap chromo of a cheerful and pleasant subject than the grandest creation of a Gabriel Max, if it present the horrible side of life as does his "Infanticide." Hanging scenes and revolting representations of Morgues may be very artistic in that they are true to nature, and even though it be true, as has been stated (though I doubt it, as art has nothing to do with morality or immorality), I believe their proper place, along with the nude in art, to be art galleries and museums. And I consider anatomical and pathological pictures with skulls and skeletons, as part of the belongings of a medical college, or of the inner hidden closets of the doctor's office. They are of the shop, shoppy, and in exceeding bad taste when exposed to the views of patients.

It may be true that the nude in art has rendered holy the beauty of women and the strength of man; but I question the propriety of placing before the eyes of the undeveloped, uncultivated, or non-professional much in the way of nude in art just as I would hesitate to open a male and female surgical clinic to the gaze of children or a lay public. In the arranging of a home, provision should be made, if possible, for sunshine to enter every room sometime during the day.

Animals, like all plants, are, in the strict Greek sense of the word, *heliotropes;* they turn to the sun naturally. And in this connection I would suggest that there is nothing more beautiful as a means of house decoration than growing plants; and if properly looked after, they are healthful in the rooms of the sick or the well. In the treatment of windows, much can be done to add to the pleasantness of a room. The inside shutters should be eliminated and placed upon the outside. The shades should be opaque, as their office is to exclude light when desired, or else there should be two to each window. A proper use of stained, cathedral, or opalescent glass, at least, in the upper half of some of the windows, can be made very effective. Some who are now building very fine houses affect to despise coloured glass in their windows, for the reason that it is being used in saloons, and becoming generally popular. For the same reason they should deny themselves bric-a-brac, fine pictures, luxurious carpets, and, in fact, anything that is beautiful.

Different windows in the same room may, by a judicious use of various shades of glass, presenting a harmony of colour, be relieved of their monotony, of plainness as barren walls by properly distributed pictures. On a bleak day in November, the cold, gray sky, as presented through the upper half of a stained glass window of amber and opal, may be made to glow with the warmth of the summer's sun; and, again, in the hottest day of August, when the sky is red with the heat of the midsummer sun, the proper treatment of another window by means of apple blossoms and a field of blue may produce the mental effect of a morning in May.

In any case, when desired, the cold, transparent glass may be made, by proper effort, to give us sunshine and shade, roses, lilies, and pinks; trees laden with fruits, happy children and humming bees and singing birds furnished a very poem in colour, a rainbow symphony of broken light, a smile on a Sahara of sameness. A mania for neutral tints may be all right in carpets and colour of walls, as furnishing a background for other materials. In her landscapes, trees, fruits, and flowers, nature furnishes few neutral shades. She is, for the most part, positive and decided in colour. Brightness and cheerfulness predominate, and I think this should be the prevailing idea in the finishing and furnishing of the home.

I am fully persuaded that, whether considered practically or sentimentally, art should have full representation and regard in the home. We should thoroughly believe in the utility of beauty, and have a sincere interest in art as the creating, adopting, and organizing of beauty. We should each and all cultivate the disposition and the ability to make our homes more livable and more lovable.

Let the prevailing sentiment at home, whether expressed in our conduct or our surroundings, be a proper mingling of brightness and shade, geniality, cordiality, restfulness, and cheerfulness. The influence can but be toward a more perfect happiness and godliness; for, however large we make the circle of life, home must be its centre.

THE EAST WIND AND DISEASE.

Dr. B. W. Richardson, in the *Asclepiad*, says that nothing adds more to the depression of some classes of disease than a long-continued and bitter east wind. An east wind is often a cold wind, but it is not the cold that is the enemy. An east wind is usually a dry wind, but the dryness is not the enemy. It is a something quite specific in the east wind which gives to it its invariable bad quality.

The east wind seems to me to affect unfavourably every disease, acute and chronic, but some diseases are more unfavourably influenced by it than others. I notice that all nervous conditions in which, for want of a more correct term, we say the nervous tone is lowered, are much intensified by the east wind, and, indeed, the special action of this particular wind is to produce want of tone or debility. Under its influence almost all sick persons say they are depressed; they do not complain of reduced appetite, nor of pain intensified, nor of derangement of the secretions, but they declare that they are rendered prostrate both in mind and body. They are also more irritable in mind, which perhaps leads them to feel acutely the sense of prostration. In brief, if a single word were wanted to express the morbid effect of an east wind on the sick man, and on all the members of the sick community, that word would be *prostration*.

That the presence of the east wind increases the mortality of those who are suffering from diseases of debility of every kind is a fact that seems undoubted. The physician, through the whole of the spell of an east wind, will find his patients complaining of not making satisfactory progress, and will see extreme cases rendered more speedily hopeless—facts indicating the existence of a general and all-pervading influence in the atmospheric sea itself as the cause of the whole of the evil. What that influence is, how the air is modified, whether it is modified by some change in the constitution of the oxygen, or whether it carries with it some foreign deleterious product, it is impossible to say, for up to this time no special chemical examination of the east wind has been made with the object of determining its special physical properties. We know the effects of it, and we know no more.

During the presence of an east wind increased care is demanded in the treatment of disease. The sick-room should always be kept up to 64 degs. Fahr., and good nourishing food, without stimulants, should be regularly supplied. It is quite true that warmth does not altogether counteract the influence of the wind, for a warm east wind has often almost as depressing an effect as a cold one; but still a warm air in the sick-room is necessary. I think also that something useful from medicines may be obtained. It is a common practice with me to administer decoction of bark or quinine rather freely when they can be borne—and they usually can be well borne—during the depression incident to the east wind.

It is a common impression that colds and bronchial affections are more easily contracted during an easterly than during any other wind. I am not prepared to endorse that view. Cold damp winds *not easterly* are infinitely more treacherous in this particular. The east wind adds greatly to the depression of a cold, but it does not extensively propagate colds. To be strictly fair even to an east wind, I have known a few persons who have declared that they enjoy better health and spirits under it than under any other condition of the air. For my own part I cannot say that it ever did me any harm. But this experience is exceptional, and the exception proves the rule.

Condensed Literature.—The tendency of the times, remarks the Norwich *Courier*, is toward condensation. We have condensed beef, a small portion of which, dissolved in hot water, gives one a draught containing as much nourishment as a whole beefsteak. We also have condensed milk, and condensed food of other kinds, which contain a maximum amount of the essential quality within a minimum amount of space. How far this tendency toward condensation will eventually carry men in the matter of food, it is difficult to predict. Perhaps the time will come when the art of extracting and condensing the active principle or essence of comestibles will be so advanced that one may be able to obtain in a small pellet as much refreshment and nourishment as he now obtains in a whole meal. Then, all the time now consumed by the good housewives in preparing breakfast, dinner, and supper, and by the business members of the family in going to and from and eating their meals will be saved. There will be no roasting over the kitchen stove, no trouble washing dishes, no worry over a varied bill of fare, no agitation over broken china, &c. A person will carry a few food pills in his pocket, and when he grows hungry he will take one and swallow his whole meal at once. Perhaps.

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."
—*Charles Mackay.*

EXECUTION BY ELECTRICITY.

The State of New York may pride herself in the fact that the gallows is to be banished and a more humane and scientific method of executing criminals is to be instituted. On June 4, Governor Hill signed the bill authorizing that criminals should be put to death by an electric shock. The bill is to go into effect on January 1, 1889, and the new method of execution will be applied in the punishment of crimes committed after that date. The passage of this bill is due principally to the efforts of the commission appointed by the legislature to investigate and report on this subject. The commission consisted of Messrs. Elbridge T. Gerry, Alfred P. Southwick, and Matthew Hale, who deserve much credit as having fathered and engineered this bill at Albany and for having brought it to a successful issue. The subject of execution by electricity has long been argued before the public, but New York State is the first government that has undertaken to make the experiment of its practicability. The failure and barbarity of the old system have been amply demonstrated by the sickening scenes that so often characterize our public executions.

The practicability of this method has been studied and experiments have been made under the commission's directions. The result of this has been the method suggested by the commission and recommended in their report. The criminal is seated, bound to a chair having a metal seat connected with one pole of the current. At the back of the chair there is an adjustable head rest, having a metal plate on its face and a metal band, which passes around the forehead of the criminal. The wires may be connected with the dynamo, which, according to the bill, may be of any approved type, or the current may be supplied from an electric light plant, or there may be a private plant arranged especially for that purpose at the place of execution. Sponges or dampened cloths should be applied at the points of contact with the convict, to render the connection more perfect. At the proper moment the switch is turned by the officer, and instant death ensues. The current passes along the spinal column and attacks the brain and nerve centres. The current may be left on a few moments to bring about complete exhaustion, and to assure against the possibility of resuscitation. In respect to the action produced upon the subject physiologically, Prof. Elihu Thomson says that "in most cases, death seems to be the result of nerve exhaustion and asphyxia, and in others may be due to rupture of blood vessels or injury to the valves of the heart, as a consequence of violent contraction under the enormous stimulus of powerful currents. Broken or interrupted currents or alternating currents, the waves of which are abrupt in character, are, without doubt, the most powerful in injurious effects upon the animal system. I think it would be quite possible to construct a small machine to give the requisite currents by induction from a small storage or other battery current, or a small machine run by hand or by water moter might be employed, which machine would be designed for the most powerful physiological effects, the nature and strength of the current being selected in accordance with this object."

To the end of testing the effect and efficiency of the electric current in destroying life, a number of experiments have been conducted upon the lower animals, under the supervision of the commission. A number of dogs were procured, and the general method employed was as follows: A pine box was provided having a zinc lining, which was connected with one pole of the electric light current and was employed in the experiments. The other pole was connected with a muzzle placed over the head of the dog, and having a copper or iron bit passing through his mouth. As soon as the switch was turned completing the circuit, instantaneous death was produced. The box was partly filled with water during the experiment to render the connection more perfect.

It was desired to watch the effect of the shock upon the functions of the heart, and to that end an experiment was made by making an incision into the trachea of a dog, into which a tube was inserted, connected with a bellows for maintaining artificial respiration The walls of the thorax were then removed, so that the heart and lungs were exposed to view and their action could be watched. The forced respirations were kept up by means of the bellows. The dog was then placed in the zinc lined box, and the muzzle and bit were adjusted as above. The current was then applied and the action of the heart was instantly arrested, and became as it was described "a mere mass of quivering flesh," in which not the least resemblance to the rhythmical movement of the heart was observable. Other experiments of the same nature were made, but in each case with the same result, and in no instance was it possible by keeping up the forced respiration to produce resuscitation.

It will be some months yet before the practical results of the use of electricity as a means of execution can be essayed, but of the enormous and deadly influence of a strong current there are constant proofs in the fatal results that have so often occurred in accidental contact with the electric light wires in the streets of our great cities.

There are several other changes in the methods of treatment of the condemned which will be put in practice under the new law. Under the new code the prisoner is to be sentenced to death without the assignment of any specific date. The week only will be named in which the crime is to be expiated, but the day and hour is to be decided upon by the agent or warden of the prison in which the execution takes place.

The announcement of the day and hour will be made only to the persons permitted to be present at the execution. No one can visit the condemned without an order from the court, except the officers of the prison, his council, physician, priest, and members of his family.

Many years ago this subject of execution by electricity was introduced and discussed by the *Scientific American*, and ever since the question has been one that has been more or less prominently brought before the public. It has now become a law. As a conclusion, is appended an extract from an editorial published in that paper in 1873, and which is of some interest in view of the passage of the bill

"The objection that electrical executions would be free from the horrible impressiveness of hangings might be easily obviated. The criminal, for instance, could be exposed upon a platform, in full view of the assembled witnesses, and manacled to a chair, his irons being connected with a battery and Ruhmkorff coil capable of giving

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Oftentimes partially decayed food causes sickness, nausea, and diarrhœa. If the bowels are cleansed from this impurity with a dose of **Seigel's Operating Pills**, these disagreeable effects will vanish, and good health will result.

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OPINIONS OF THE PRESS (EXTRACTS).

LANCET, June 16th, 1888.

The idea embodied in this variety of cotton fabric for body clothing is, as the name implies, that of providing ready means of escape for perspiration as vapour, whilst affording facilities for securing next the skin the presence of a good non-conductor of heat in the shape of warm air, and thus avoiding the access of chill. And these objects appear to be well attained by the material submitted to our notice.

MEDICAL PRESS, June 13th, 1888.

The advantages of this form of structure are numerous. Articles so manufactured are light, elastic, and durable, and the air contained in its meshes, of cotton, or cotton and silk, on account of the material being a bad conductor of heat, preserves the body from vicissitudes of temperature. Perspiration passes readily through, and consequently such garments never feel wet, no matter how violent the exertion.

HEALTH, June 22nd, 1888.

One of the best tests of the value of Cellular Cloth, for the preservation of health against chill, is to be found in the fact that, as we ourselves have experienced, a cycling shirt of this material after a long run on the tricycle, instead of being saturated with perspiration, remains comfortably dry. This proof of the value of this clothing is in itself a powerful testimony to its service for all classes of the community. The Cellular Cloth washes readily, and does not shrink. As regards the comfortable nature of its wear, we can pronounce it to be absolutely non-irritating to the skin. If passed over the skin of the face this material is found to be delicate and soft, and its wearing properties are of a high order, inasmuch as it is not readily torn or injured.

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say an eighteen inch spark. The mode of closing the circuit might be a simple button, to be pressed by the finger of the sheriff. Then, when the usual formalities conclude, the latter official establishes the current, the convict instantly expires, and all is over. There would be no slipping nor breaking of ropes, no black caps, no suspension of a writhing form for twenty minutes or half an hour, none of the grim watching for death by the medical attendants, nor any of those hideous surroundings which now only serve as food for sensation mongers, and prove that a relic of barbarism can still be retained in the laws of a civilized country."—*Scientific American.*

To Prevent Gum Moulding.—Hirschberg adds a few drops of sulphuric acid, whereby the lime contained in the gum is precipitated as sulphate; after standing, the mucilage is strained off, and exhibits no tendency to mouldiness, even after standing for eighteen months.

Contamination of Air by Manufactories.—In an age when the size and population of our towns are increasing with great rapidity under the stimulus of commercial and manufacturing enterprise, whatever tends to promote the wholesomeness of those great hives of industry becomes a matter not merely of comfort, but of vital concern, to those who dwell in them. Great towns are, indeed, full of customs and pursuits which are avoidable causes of injury to the public health. If we examine the present conduct of trade with a candid mind, however sanguine, we cannot but find in the general conditions fostered by feverish competition, in the too common mismanagement of meal times, food, recreation, rest, and atmosphere, proof enough to fortify abundantly the serious indictment we have made. It needs, indeed, no protest, no proof even, from us to bring home the practical force of that remonstrance against the wholesale neglect of sanitary rule which is marked in the pale face of many town-bred workers. The anæmic stamp of countenance is due to a variety of unhealthy conditions. Not least important among these is a scarcity of oxygen in the surrounding air, and the presence of impurities due to respiration in confined spaces, to coal-burning on a large scale, to sewer gas, and to the volatile or suspended products of manufactures. This too-prevalent anæmia is the mark of lowered vitality, and the very frequent forerunner of more decided illness. If, therefore, its causes can by any means be counteracted, the use of these is clearly advisable. Not a little has been done already by means of household ventilation and systematic house drainage to purify the air we breathe. In another direction very little indeed has been accomplished, though measures of reform are not only most desirable, but are likely in many cases to become, if carried out, an actual source of income. We refer to the refuse produce emitted by manufactories and work-fields. Notwithstanding the circulation of fresh air which is constantly flowing over town and country, it must be allowed that there is in many places an excess of noxious matter in the atmosphere above what is compatible with healthy life. Coal dust, iron filings, clay from potteries, carbonic gases from brickfields, sulphurous gases, and hydrochloric acid from metal and chemical works, besides ammoniacal vapours, nitrous and nitric acids, arsenious and other metallic fumes, organic gaseous products of decay, are still freely cast forth into the surrounding air. Their influence in the atmosphere is often plainly perceptible by the senses, and, if not as plainly poisonous, has, without doubt, its share in that subtle impairment of vitality to which we have referred.—*Lancet.*

Healthy Houses

"A happy home must be a healthy home."—*Anon.*

WATER-SUPPLY OF SUMMER RESORTS.

Thanks to the teachings of intelligent physicians and sanitarians, and in some degree, also, to the more or less well-disguised advertisements of the proprietors of patent filters or of table waters, both the teachings and the advertisements being given wide circulation by the daily and weekly press, most people now have more or less vague ideas that water which contains sewage may cause disease.

But, while they admit this theoretically, they actually pay no attention to the matter so long as the water offered them to drink has no offensive appearance, odour, or taste. They assume that water which does not cause an epidemic of disease sufficient to attract attention cannot be dangerously polluted; they dislike to be bothered or worried by doubts or suggestions on the subject, and in making arrangements for their families to spend the summer at some so-called resort, or on a farm, the character of the water-supply is one of the last things they would think of inquiring about.

This is, perhaps, partly due to the fact that they consider the investigation of the purity of a specimen of water as a profoundly mysterious operation, requiring the services of a skilled chemist, and, therefore, much beyond their unaided powers. We have received from one of our subscribers a letter on this subject in which the following paragraph occurs—viz.: "You would greatly assist many of your readers, including myself, by giving some simple instruction on the testing of drinking-water, which would enable many to see for themselves who cannot afford to pay for an expensive analysis, and it might help, also, in convincing sceptics.

We cannot give any simple method of water-analysis which could be at all relied upon to determine whether a water is impure or not. The best thing for a person who is not a chemist to do in such a case as that referred to by our correspondent is to see for himself the nature and surroundings of the source of water-supply. Is it from well, spring, pond, stream, or cistern? Are there any cess-pools, privy-vaults, piles of manure, &c., near it—say within fifty feet? If from ponds, are the surrounding fields cultivated and manured? Examination on these points will generally give data for a fair estimate as to whether the water is polluted by sources in the immediate neighbourhood.

Of simple tests of the water itself there are but two that are of any use in the hands of persons who know nothing of water-analysis. The first is the smell. Fill a perfectly clean quart bottle half full of the water, cork, and shake it, remove the cork and see if any odour can be detected at the mouth of the bottle. Cork the bottle again and put it in a warm place for a few hours, or set it in a pan of hot water for an hour. Shake, uncork, and again test by smell. If an unpleasant or faint musty odour is detected in either case, the water requires more minute examination. The second simple test is to evaporate a quart of the water to dryness in a new tin pan or cup, and note the character of the residue and what happens when it is strongly heated in a metal spoon. If the sediment left after evaporation is small, and on being burnt in a metal spoon gives rise only to such an odour as comes from burning vegetable matter, the water is not greatly contaminated with sewage. But if the sediment is in considerable quantity, dark in

colour, and burns giving off the peculiar odour of burning hair or other animal matters, then the water is foul.

The difficulty with such tests as these is that the results are clear enough when the amount of contamination is great, but when it is small and intermittent they do not help us. Taken with careful examination of the surroundings of the source of supply they will, however, in most cases enable one to make a very fair estimate as to the purity of the water in a given well or cistern.

"Sick Diet and Applications" is the title of a little penny pamphlet, by Mr. F. W. Cory, M.R.C.S.E., containing a variety of useful recipes calculated to be of service in the sick-room, and home generally. This pamphlet would prove very useful to district visitors and workers among the poor. It is sold at a penny, and is published by Messrs. Cassell & Co., London.

Two Pamphlets, by Dr. Litton Forbes, entitled "On Deafness," and "Diseases of the Nose" respectively, are well worthy the perusal of sufferers from these ailments. The author gives a clear description of the various causes of the affections in question, and indicates the appropriate treatment to be carried out by the physician. The pamphlets are published by Mr. Renshaw, 356, Strand, London, W.C.

Magazines of the Month.—*Harper's Magazine* for August contains the concluding part of Mr. Rider Haggard's story, "Maiwa's Revenge." "A Chiswick Ramble," by Moncure D. Conway, is an entertaining paper on a London suburb, and the old ballad of "The Leather Bottel" receives apt illustration from Mr. Abbey. *St. Nicholas*, for young people, shows a most entertaining number for the month. *The Century Magazine* has, for a frontispiece, a portrait of Mr. Kennan, whose Siberian papers have attracted so much attention. Able papers on "A Home of the Silent Brotherhood," and on "Lincoln Cathedral" are also included in this part. *The Season* for August is an interesting number, dealing, as it does, with the latest fashions in ladies' dress for summer. Messrs. Cassell's serials, *The Countries of the World* and the *Illustrated History of England*, continue their successful career. The *Housewife* is a monthly magazine, in which a variety of useful information, pertaining to the household, is given.

Coca Cultivation in Ceylon. — A correspondent in the *Tropical Agriculturist*, who has been growing coca for some years chiefly for the seed, and is now extending the cultivation in view of leaf harvest, which promises to be most remunerative, writes as follows concerning the cultivation of the plant:—Germination commences on the tree, as may be ascertained by dissection of the fruit. Seeds should therefore be sown while quite fresh on the surface of good loam, and shaded from the sun. After this no special cultivation is required. The plants can be put out like tea, three to four feet apart, in good land and sheltered, which they prefer to poor soil and exposed ridges. Markham states that the average yield of leaf in Peru was 800 pounds per acre, and that the profit from a coca farm was 45 per cent. This seems too good to be true; but even at 9d. per pound (present price of leaf in London averaging 1s. 3d.) the profit should be considerable. Machinery is not required, and the trees may be allowed to run at their own sweet will, leaves being taken off as fast as they arrive at maturity. Fruit bearing commences at eighteen months, and, when seed is no longer required, can, of course, be checked, and the energies of the plant directed to producing leaf.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Results of Preventive Measures.—If the question be asked, where is the proof that our preventive measures—our sanitation, vaccination, and isolation—have had the results we speak of, the answer is at hand. It is given by the Registrar-General in the language of figures. He points out that, according to the newest English life-table, the children born in England in any one year have now divided amongst them "nearly two million years of life," more than would have been the case thirty-five years ago. In England and Wales the annual mortality per million of population per annum has been as follows:

1861-65	1866-70	1871-75	1876-80	1881-85
22,595	22,436	21,975	20,817	19,310

Comparing the first period and the last, the difference is 3,285 per million, and, taking the population at thirty millions, the total annual saving is about 100,000 lives. And if for every death there are twenty cases of sickness, then we have two million less cases of sickness than in the first period. Interesting calculations have often been made on this subject, and especially by that father of sanitation, Mr. Edwin Chadwick, who, happily, is still with us, a witness of the success that has attended his life's work. You can count the cost of each case of sickness, of lost work, of doctors' bills, and so on, and also the monetary value of each of the 100,000 lives saved. And you can put all this as an income against the interest on the money spent in sanitary improvements, in water-works, sewage-works, vaccination-grants, officials' salaries, &c., and even on this lowest ground—on this merely commercial basis—we find that cleanliness, which is next to godliness, resembles godliness itself in being "great gain."—*Dr. McVail.*

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Cremation in Italy.—With the exception of Florence, where the body of the Maharajah of Kolapore was burnt upon a funeral pile in the year 1870, but where cremation was not regularly practised until 1884, Milan was the first Italian city in which cremation obtained the sanction of the Government, and the first body cremated there (Jan. 22, 1876) was that of Signor Albert Keller, who had died just two years before, and had left a sum of £400 to defray the cost. The difficulty of obtaining the necessary permission of the Government was so great that his body had to be embalmed and buried, but when the consent of Signor Nicotera, the Minister of the Interior, was at last obtained, the association in favour of cremation, which had in the meanwhile been formed, carried out his wishes, having first erected a crematorium—which has since been replaced by a much larger one, in which the process of incineration is carried out, as I can from personal observation testify, with all due regard, not only to hygienic principles, but to the sentiments and feelings of the relatives and friends who attend the ceremony. The new crematorium is at the extreme end of the Campo Santo, just outside the walls of Milan, and it is open to the inspection of visitors. The temple, as it is called, is a building in the Græco-Doric style, constructed of stone, and having an open façade supported by columns, from behind which rises a tower which, as seen from the outside, looks as if it formed part of the temple, although in reality it stands quite by itself, and is

the chimney. The inside of the building is divided into several rooms, in the first of which the religious rites which attend the incineration take place, and the walls of which are lined with funeral urns containing the ashes of many of those who have been cremated at Milan. There is a separate room in which the bodies are placed pending cremation, and a third in which the relatives and friends spend the two hours occupied by the cremation itself. There are two furnaces—one being for general use, and the other for the bodies of persons who have died of contagious diseases, and are not natives of Milan. In both cases the process lasts about two hours, and the body is not visible to the onlookers when being put into the furnaces, nor are the ashes afterwards. The example of Milan soon found imitators, especially in the northern and central provinces of Italy, and there are now something like thirty-two societies and committees for favouring cremation, though they have not all crematories of their own—many of the societies sending the bodies of those who have left instructions to be cremated to Milan, Rome, or Florence. Cremation has not for the last two years or so made so much headway as it did at first, for the number of persons burnt last year was only 165, as against 181 in 1886. It should be added, however, that the Pisa Society has not yet sent in its statistics for 1887, and that crematoriums will be opened in the course of this year at Turin, San Remo, Verona, Bologna, Pavia, and one or two other towns. Of the total number of 952 cremations that have occurred in 17 cities in Italy since 1876, as many as 518 have taken place in Milan and 155 in Rome.—*Times*.

Leprosy in Norway.—Leprosy, the scourge of the East, and believed by many to be peculiar to hot countries, is unhappily only too well known in these high latitudes. Many theories are current to explain its presence. I have nothing to do but say it *is* here, and is at times exceptionally virulent. If I do incline to an opinion as to its origin and development in Norway, it is that poverty of the blood caused by living for months in every year on dried fish begins the evil, and that the intense cold, which is often in its effects akin to intense heat, finishes it. Anyway, there is a celebrated leper-house in Bergen, and as the ship-surgeon, a very agreeable young fellow named Macqueen, was going there on a professional visit, he asked me to go with him. We went, and after some little difficulty with the portress, a flat-faced young woman, who had her hair cut as short as shears could cut it, and who evidently didn't care much for strangers, were shown into the ground-floor wards, wherein female patients were amusing themselves, if under the circumstances amusement be possible. The appearance of these poor wretches is awful—the word is scarcely adequate to represent it—their faces being always fearfully disfigured, and sometimes quite eaten away. One had a skin plaister over the whole of her face, with a hole for the mouth and two holes for the eyes. After going into two or three rooms I had enough, and more than enough, not so much because I was shocked by the sights as that I was hurt, and hurt very much, by the pain of these poor creatures at being exhibited. They would turn their faces to the wall, bow their heads into their hands, or do anything they could to escape our attention. If it was feeling for her unhappy sisters that caused the proud young portress with her hair cut for fighting to object to our entrance and say rude things, I freely forgive her—poor loathsome sufferers, their position is indeed unhappy. —*Referee*.

IMPORTANT ANNOUNCEMENT.

BONUSES TO SUBSCRIBERS TO "HEALTH."

HEALTH, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Bookstalls, on the day of publication. It may also be ordered from the PUBLISHER, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain HEALTH from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following FREE GIFTS and BONUSES to all who subscribe to HEALTH for one year or longer :—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of HEALTH, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of HEALTH weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health".(Chatto & Windus), value 6s. The copies of HEALTH so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of HEALTH, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, "Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to anyone who succeeds in obtaining three yearly subscribers to HEALTH, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with HEALTH should be addressed directly to the PUBLISHER, 2, Paternoster-square, London, E.C., and *not to the Editor*.

A SORE EYE SHOULD NOT BE BANDAGED.—The custom, prevalent among physicians, as well as the laity, of tightly bandaging or tying up the eye as soon as it becomes inflamed or sore, is a bad one. The effect upon the eye is bad. It precludes the free access and beneficial effects of the cool air, and, at the same time, prevents or greatly retards the free egress of the hot tears and morbid secretions of the inflamed conjunctiva or cornea, or both. In those cases, too, where a foreign substance has gotten into the eye, the bandage (which is usually clapped on, the first thing) presses the lids more closely against the ball, and thus increases the pain and discomfort, by augmenting the lacerations caused by the foreign body. This cannot fail to be harmful. In those cases where the light is painful, it is my habit to adjust over the organ a neatly-fitting shade, which, while it excludes the light, allows the free access of air.

"ELECTRICITY IS LIFE!"

(TRADE MARK.)

ELECTRICITY and galvanism have long played an important part in the alleviation or cure of the diseases which have proved obstinate under the ordinary treatment, and it is no assumption or conjecture, but an established fact, after an experience of 40 years, that MR. PULVERMACHER'S GALVANIC APPLIANCES have been, and are, the only successful means of supplying the electric deficiency that many persons suffer from, and which makes life all but unbearable to them. There has been, as we are aware, an objection on the part of some to the use of electricity, but this has arisen from the injurious effects of the spurious and worthless appliances that have been showered upon the public by means of "puff" advertisements. PULVERMACHER'S PATENT GALVANIC CHAIN BANDS, BELTS, AND BATTERIES have, however, stood the test of the most eminent medical authorities in every part of the world, and they have proved over and over again their remedial efficacy in thousands of cases. The appliances have not only received the commendation, as we have already stated, of the most eminent medical men, but also that of the principal scientific authorities and the leading schools of medicine in England and France.

The name of PULVERMACHER is, indeed, now a household word, and few men have better earned the gratitude of suffering humanity than he has. Those in search of health, therefore, should apply PULVERMACHER'S ELECTRIC BELT, the only real electric one in existence, for they will find it the source of a most rapid cure for many distressing ailments. The tortures of rheumatism, the excruciating pains of sciatica, the oppression and sinking of indigestion and liver complaints, the agony of neuralgia, the inconvenience of loss of voice, the short breathing of asthma and bronchitis, the loss of vital power by paralysis, epilepsy, female complaints, functional disorders, and general debility—diseases that have refused to succumb to ordinary remedies have all been in turn relieved or cured by means of MR. PULVERMACHER'S APPLIANCES. The continuous voltaic electric currents have been rendered self-applicable by many improvements, and although applied externally penetrate to the innermost organs, promoting digestion, circulation, and nutrition, and performing their recuperative and restorative work in silence, devoid of any chances of uncertainty. The value of these appliances may be shown by the gratifying reports received daily at PULVERMACHER'S GALVANIC ESTABLISHMENT, 194, Regent-street, established over 40 years; and the fullest particulars in reference to the various Belts and Batteries, that should be used for a number of diseases, including among others already mentioned nervous exhaustion, writer's cramp, trembling and nervousness, together with an immense amount of useful information and facts too numerous to mention, will be found in MR. PULVERMACHER'S new pamphlet, which may be had, post free, on application to him at 194, Regent-street, London, W.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. All questions are answered free of charge in the columns of HEALTH.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor.*]

PROTEUS.—Try the effect of taking fifteen grains citrate of potash in a tumbler of water, between meals, twice daily; attend thoroughly to your digestion, and avoid constipation.

G. E. A.—Try a vegetable dietary—stewed fruits, apples, or oranges, &c., and whole-meal bread, with Grant's Oat Flour for supper and breakfast; avoid tea and coffee; take Cascara Cordial—twenty drops in water between meals once or twice daily.

R. B.—Try the effect of taking the following pill:—Powdered ipecacuanha, half a grain; powdered capsicum, one grain; powdered rhubarb, two grains; extract of gentian, three grains. Six such pills to be made, and one to be taken half an hour before dinner when there is any liver irritation.

NETA.—We advise you to consult the French Hygienic Society, 56, Conduit-street, London, W., and use their Pomade Trieophile for the cure of scurf. This society will also be able to advise you regarding the use of a harmless dye or restorative for grey hair.

OTTO.—Try the following for the hair:—Bay rum, two ounces; glycerine, two ounces; tincture of cantharides, one drachm; oil of bergamot, half a drachm; sulphate of quinine, ten grains; water, four ounces. To be used every morning, and to be rubbed into the roots of the hair, all other oils and pomades being avoided. Use a soft brush only, and wash the hair once in a week or ten days, at night, with Bayley's Spermaceti Soap and tepid water. Keep the hair short for a time.

G. HERMANN.—Maclaren's books on Physical Exercise (published by Macmillan & Co., London) are the best guides we know to a knowledge of diet, &c., required for training in athletics.

C. A. M.—Take more open-air exercise, and use a rough towel to your face after washing. Use Bayley's Spermaceti Soap only, and if blackheads are present press them out, and sponge the parts thereafter with Bayley's Lavender Water (17, Cockspur-street, Pall-mall, London, S.W.).

ITALIA.—Marshall's "Tritola" is that you should take regularly, n the form of milk puddings. Try also the "Ptyaloid" made by Marshall (Ibrox Flour Mills, Glasgow); it is a predigested food.

E. PETERS.—Such medicines render the body both thin and weak. Give up taking such, as they only increase the mischief they are intended to cure.

L. A.—You cannot restore the colour of the hair by any such preparation as Brilliantine. This hair-preparation may be made by dissolving one part of castor-oil in four parts of eau de Cologne. Another formula is, one part each of glycerine and eau de Cologne, two parts of honey, and four parts of rectified spirit.

MARTHA C.—In both cases you will only be safe and adopting a reliable method of cure by consulting a specialist in skin-diseases. If desired, we can send you address of such, on receipt of stamped addressed envelope. If you meddle with these deformities you will be likely to leave a scar.

E. PARK.—Wash the hair twice or thrice weekly for a time with a pint of hot water (soft) in which a piece of lump ammonia the size of a Brazil nut and a slightly larger piece of borax has been dissolved. Allow the fluid to cool, and use as a wash.

F. BURDON.—Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and study what is therein said about cases like yours, and diet and tonic remedies.

LACKS.—Fairchild's Pancreatic Extract (Messrs. Burroughs, Wellcome & Co., Snow-hill-buildings, London) should be tried. Take milk which has been peptonized in this way, stale bread, white boiled fish, meat soups made with Brand's Beef Preparations, and see that you rest after your meals.

MAX.—Give Dahl's Cakes a fair trial as a remedy for constipation. They form a safe and excellent remedy in this ailment.

G. P. X.—The Coca Tobacco might be tried. If it fails, try Marshall's Cubeb Cigarettes (to be had of all druggists) for your chest ailment.

EXTRES.—Such a question can only be answered by an oculist. Mr. Browning, of 63, Strand, London, W.C., might be able to suggest some expedient for you.

A. THOMSON.—Pownceby & Co., of Oxford-street and Strand, London, can be thoroughly recommended to you as dealing in pure wines and spirits for invalids. Try hock if the other liquor does not agree.

A. M.—A book that might suit you is Carpenter's "Physiology," or Power's "Manual," published by Churchill and Cassell.

N. E.—You will find the question you ask fully and completely answered in the pamphlet, "A Lecture to Young Men," published by H. Renshaw, 356, Strand, London, W.C., post free for 1s. 1d.

A PLAYER.—We know the "Remington" type-writer well, and use it regularly. It is an excellent machine. The "Columbia" is worked on an entirely different principle, and there are others, again, of different construction. These latter we have had no experience of, but as far as relief from strain and writer's-cramp is concerned, we recommend the Remington.

A MOTHER.—Give your child no food containing starch until it is nine months old. You are simply interfering with its digestion. Give Mellin's Food, if it needs any addition to the milk which is its natural food.

Y. S.—Take twenty drops of Fer Bravais after your meals thrice daily in water, and wash the affected parts night and morning with Bayley's Soap and warm water. You will only recover your tone when you have been able to take your mind off your troubles, which are certainly more fancied than real.

APEX.—Give up the tonic for a time and take twenty or thirty drops of Cascara Cordial twice daily between your meals. Eat whole-meal bread, stewed fruits and vegetables, and avoid tea and coffee, and take Dahl's Cakes. Substitute for tea, morning and night, Scott's Midlothian Oat Flour. You must not take aperients as a remedy for constipation, as they only increase the evil.

MENTHOL.—Friar's Balsam is the compound tincture of benzoin. Put a teaspoonful in a pint of hot water (at 140 degs. Fahr.), and inhale for ten minutes or so, but be careful of cold thereafter. Use an inhaler, such as may be procured of any chemist.

Z. Z.—In such a case infection must have been conveyed from the skin-surface.

I. F.—Use the "Sanitas" preparations. They are the best. For your case the Fluid and Powder are well adapted.

A. BLACK.—See articles on "Unwholesome Foods" published in HEALTH. *Trichinosis* is not produced by tapeworms.

G. F.—See Dr. Klein's book on "Micro-Organisms and Disease" (Macmillan).

PETERSHAM.—Read Pye Chevasse's book, "Advice to a Mother," published by Churchill, 11, New Burlington-street, London, W.; and also Miss Jex Blake's "Manual of Infancy" (Macmillan & Co.), in which full directions regarding infant-feeding are given. Write to the publisher of HEALTH for the eight articles on "Infant Health," price 4½d. each.

C. PERRIN.—Try Bayley's cure for piles (17, Cockspur-street, Pall-mall, London, S.W.), which in your case is almost certain to effect a cure. It is a safe and trustworthy remedy.

REX.—Try taking twenty grains bromide of potash dissolved in a wineglass of water at bedtime for a few nights, and note effect of this drug on your symptoms. If not bettered, write again.

LATENT.—The following is an iron and quinine mixture, which may do good in the case you name:—Sulphate of quinine, eight grains; sulphate of iron, sixteen grains; dilute sulphuric acid, eight minims; water to eight ounces. A tablespoonful thrice daily.

E. TAIT.—Vaseline possesses healing properties, and is a good application to burns, &c. It forms the basis of many ointments and pomades, as it does not turn rancid. Vaseline will not certainly cure every hair complaint, or work wonders. Lanolin is replacing it in pharmacy.

G. ELDER.—There is a patented process of the kind in existence. We can send you particulars, if desired.

JIM.—Change your diet-habits; and attend to the following rules:—Avoid tea and coffee, and take Scott's Oat Flour to breakfast and supper; this, with twenty drops of Cascara Cordial, or two Cascara Tabloids, taken in water once or twice daily, an hour before food, will probably relieve you greatly. Avoid solid flesh-food, and take your meat mostly in the form of strong soups, for making which use Brand's Beef Essence. White boiled fish, stewed fruits, milk puddings, &c., may also be tried.

APOTHECARY.—To bleach sponges, permanganate of potash is employed. The bleaching-bath consists of two drachms of permanganate of potash and one ounce of sulphuric acid to a gallon of water, and the second bath of four ounces of carbonate of potash to one gallon of water. First wash the sponges thoroughly with water, then dip in the bleaching-bath until they acquire a pale colour. Wash thoroughly with water, then place them in the second bath until they acquire a light tint. Finally, wash well and dry.

F. CRUDDAS.—That disease would be extremely rare at the age you name. The chief symptoms would be pain and swelling in the part; but only a surgeon could decide the point, and this after an examination. For articles on the subject see HEALTH, Nos. 62, 139, 140, 141, and 142.

F. LESLIE.—Use Sanitas Fluid freely in such a case to the skin and clothes. Use the Powder to the closets and sinks. Sanitas Soap may be used for all the woodwork.

C. S.—Certainly your ailment is curable. We advise you to try the ointment recommended to "Egret" in HEALTH, No. 276, and to note directions contained in advice there given. For the rest, live plainly but generously, avoiding salt foods and pastry. There is no need for you to seek a foreign resort. If such be needed in your case, we advise you to try Buxton. Let us hear how you are after a trial of the advice given you.

VERITAS.—1. The symptoms you name are of no consequence, and only indicate a little digestive disturbance. Continue the Pitkeathly Water. 2. If you take sulphonal at all you should take it, under medical supervision, in the form of Messrs. Burroughs, Wellcome & Co.'s Tabloids. But you would be far better to take plenty of open-air exercise, and procure sleep in a healthy and natural fashion. No sleep-producing drug whatever should be taken regularly. 3. Moffat is a resort which might suit you very well, and the air is well adapted for nervous cases. 4. Any surgical instrument maker in your city will provide you with elastic stockings. 5. The drugs you name cannot be taken save under medical direction. 6. We do not know the gentleman. [Not so many questions again in one letter, please.]

EXODUS.—The "lumps" you name are enlarged glands. Paint them daily with tincture of iodine till the skin becomes tender and then cease painting. You must not indulge in active exercise until you are well. Internally, take as a tonic fifteen drops Fer Bravais after meals, in water, thrice daily.

J. G.—Try the hair lotion recommended to "M. E. P." in last week's number. Use a soft brush and comb only; and wash the hair once a week with Bayley's Spermaceti Soap and tepid water. Keep the hair short for a time.

PARADOX.—1. Try the tonic recommended to "G. F. O." in HEALTH, No. 276. 2. Apply a little Hazeline to the parts, and wash, night and morning, as a necessary duty for personal cleanliness. 3. Use a little plain vaseline as a lubricant. 4. Such a mixture is a very crude and, in our opinion, unsuitable preparation.

ALBICTUS.—What do you expect to happen if you put yourself in the position you indicate? Do you suppose excitement, under the circumstances, is at all unnatural? Your smoking depresses you evidently; lessen it greatly, or give it up altogether. If you will revise your food-habits, and take the Dahl's Cakes and Cascara, &c., as duly prescribed to "Nemo" in last week's HEALTH, you will get quite well. Your digestive functions are slightly disordered, and you certainly do not require tonics or other drugs. Write again, if not cured.

R. G. B.—Give up taking coffee if you use that beverage, as it often causes itching; and apply a little Pure Hazeline to the parts as a lotion, after washing them night and morning. If this does not suffice, then try the ointment recommended to "Egret," in HEALTH No. 276.

NEMESIS.—No: we do not think there is any connection between the throat trouble and the "exercises" you name. The latter are unwise and tend to produce serious nervous symptoms on both sides; in addition to which, as you must be aware, they are not sanctioned by health-laws or other considerations. If you are wise, they will be renounced once and for all. The throat trouble may be due to defective drainage, or to simple relaxation and cold. Consult a good physician. We can send you address of such, if desired, on receipt of stamped addressed envelope.

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ACID PHOSPHATE.

A liquid preparation of the phosphates, recommended by physicians for

Dyspepsia, Mental and Physical Exhaustion, Nervousness, Weakened Energy, Indigestion, As a Drink in Fevers, &c.

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MARY WILSON.—Use the Lanoline Cold Cream regularly, as made by Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C., and to be had of any good druggist. Lanolin is the natural fat of the skin, and is the best preparation for wrinkles and for keeping the skin soft.

A SUBSCRIBER.—[Please use a more distinctive name in future.] If you had read the article with any degree of care, you would have seen that it discouraged the taking of arsenic and all other drugs for the complexion. Arsenic should never be taken, save under medical advice. See advice given to "Mary Wilson" above. You can only obtain a good complexion by maintaining a good state of your general health.

DUCKLING.—Better to be cautious about bathing in the sea. A bedroom-bath in the morning would be far less risky, in a very stout person especially.

STANHOPE.—Supervise your food arrangements, and rest after meals. Take, also, fifteen drops Fer Bravais after food, in water, thrice daily. Plenty of outdoor exercise is necessary. Write again, if need be.

RICHARD.—Inhale the vapour (at bedtime) of a pint of hot water to which a teaspoonful of Friar's Balsam has been added. Internally, take a dessertspoonful of Scott's Pure Cod Oil Emulsion after your meals, and try cold or tepid sponging to your chest each morning, followed by brisk friction with a rough towel.

G. CLAPTON.—Persevere with the remedies of the French Hygienic Society which you are now using. Let us hear the result in a week or two.

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SUFFERER (Southsea).—Use Dahl's Cakes regularly as advertised in HEALTH, and you will find them most serviceable. Stop taking tea and coffee, and substitute Scott's Oat Flour therefor. Eat little meat, but take stewed fruits to dessert, and take also one or two Cascara Tabloids (Burroughs, Wellcome & Co.'s) at bedtime.

JIM.—Wear the Cellular Clothing advertised in our pages: you have evidently caught a severe chill from damp flannels. Take hot baths at bedtime, and sleep between blankets. The Cellular Clothing will prevent chill and afford equable warmth.

PRUDHOMME. — See advice given to "Sufferer" above regarding use of Dahl's Cakes, &c.

B. G. P.—An absurd idea: the lungs have no such function.

KURT.—A quack affair entirely: if you are wise you will have nothing whatever to do with the "Association" you name.

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